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Evans

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(54) **SHOE SOLE COVER**

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(51) **Int. Cl.**

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A43B 13/36	(2006.01)
A43C 13/00	(2006.01)
A43B 13/02	(2022.01)

(52) **U.S. Cl.**
CPC ***A43B 13/36*** (2013.01); ***A43B 3/16*** (2013.01); ***A43B 13/02*** (2013.01); ***A43C 13/00*** (2013.01)

(58) **Field of Classification Search**
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USPC ..... 36/7.1 R, 7.5, 73, 135
See application file for complete search history.

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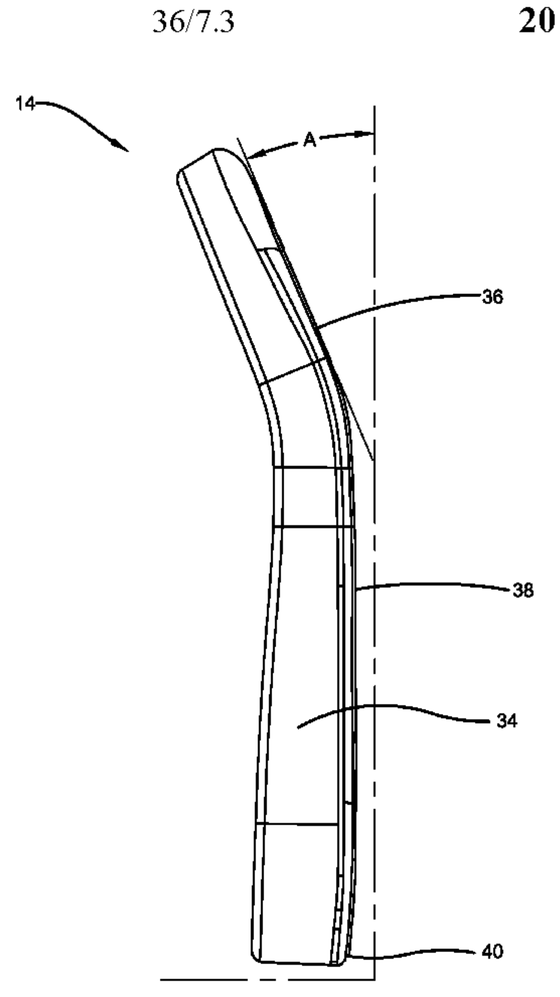
(57) **ABSTRACT**

An apparatus is provided that includes a sole cover. The sole cover is configured to be removably attached to a sole of a shoe to cover the sole of the shoe. The sole cover includes a first covering section and a second covering section, where the first covering section is configured to cover the sole of the shoe at a toe box portion of the shoe. The second covering section is configured to cover the sole of the shoe at a waist portion of the shoe. The first covering section angles upwardly and away from the second covering section at an angle relative to the second covering section at an angle relative to the second covering section when the second covering section lies flat on a horizontal plane in an undeformed state. The sole cover is of a sufficient elasticity that enables the first covering section to bend downwardly when the sole cover is attached to the sole of the shoe. The angle and elasticity are of sufficient values to urge the sole cover against a bottom of the sole of the shoe to help secure the sole cover to the sole of the shoe when the sole cover is attached to the sole of the shoe.

20 Claims, 10 Drawing Sheets



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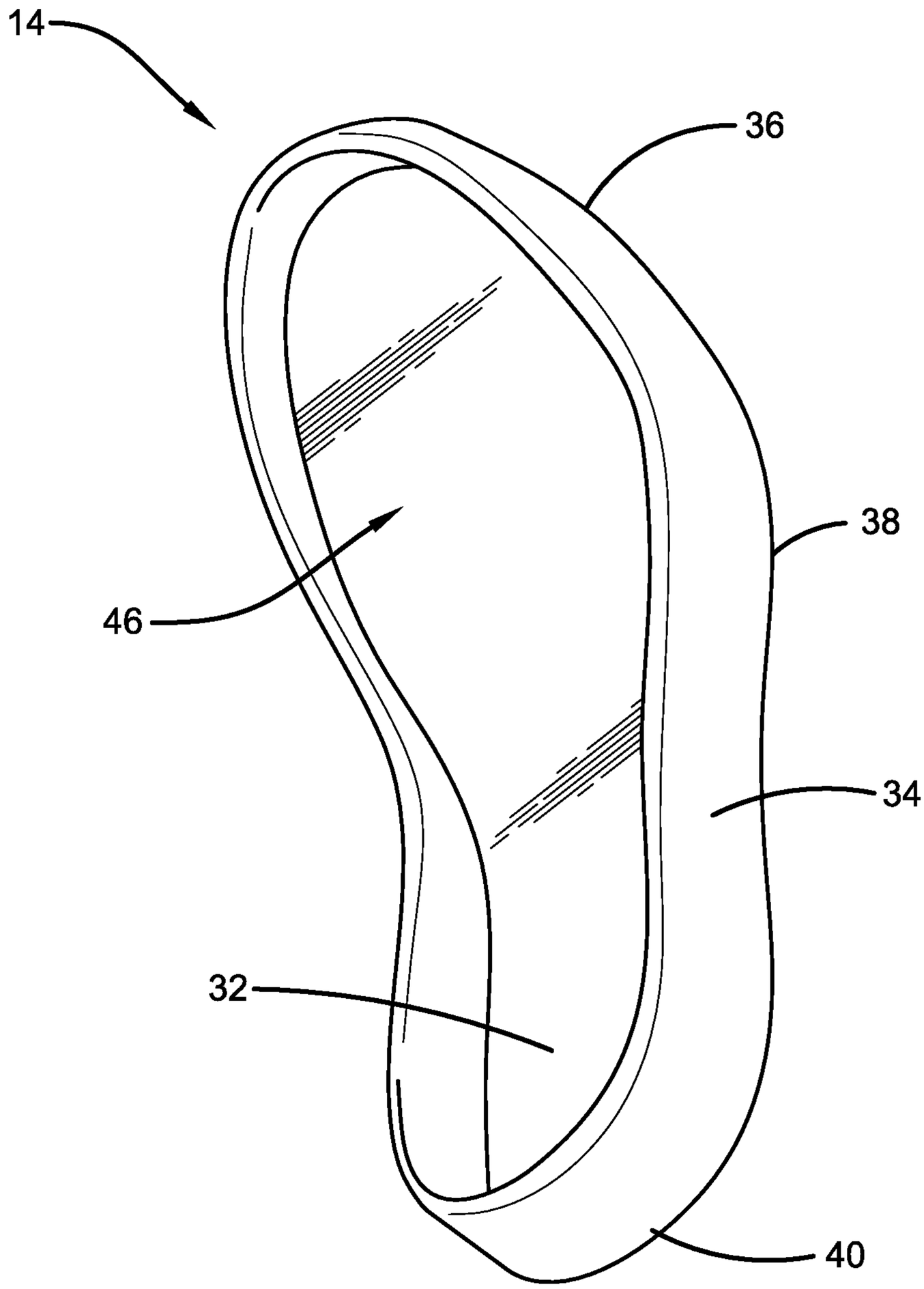

FIG. 1

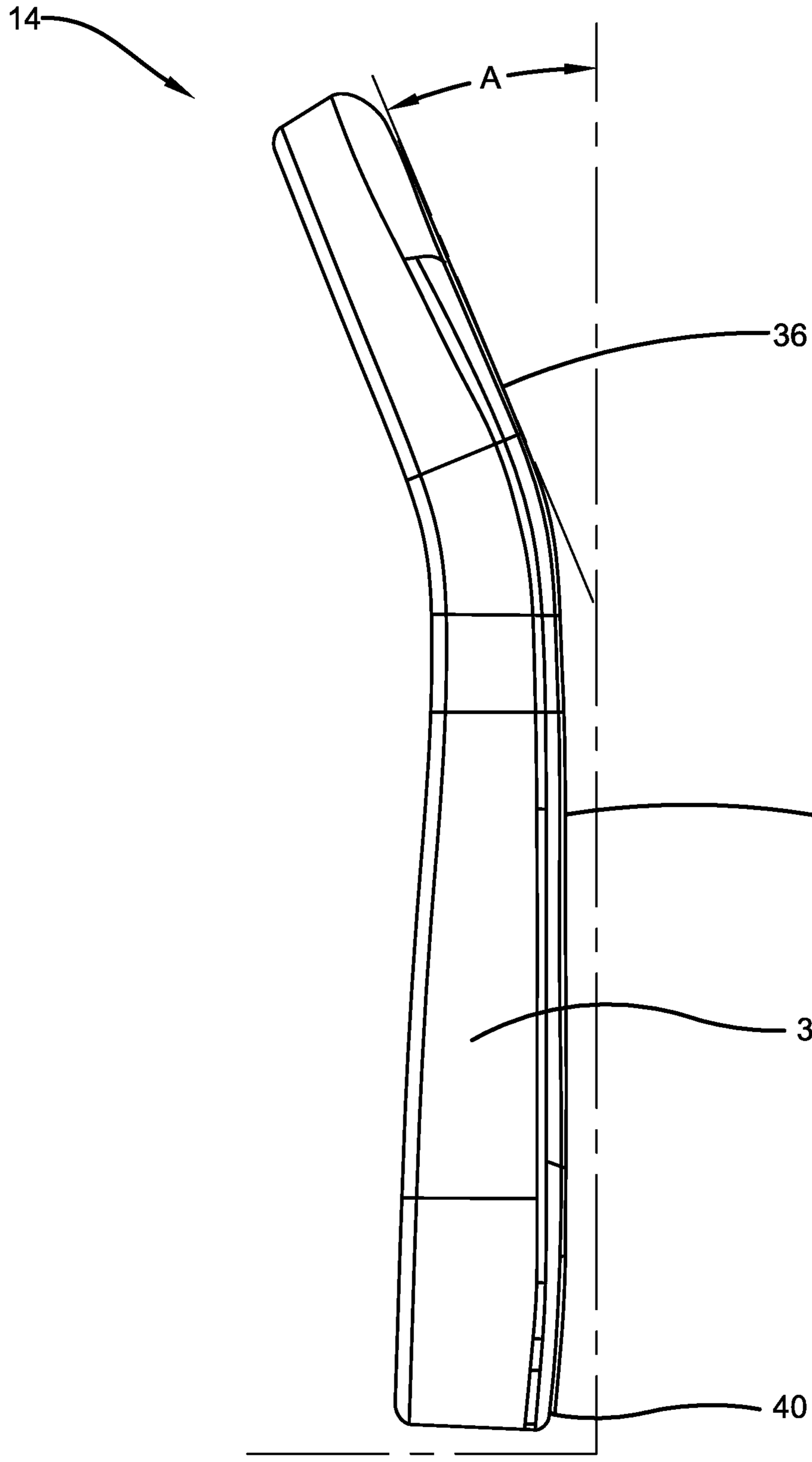

FIG. 2

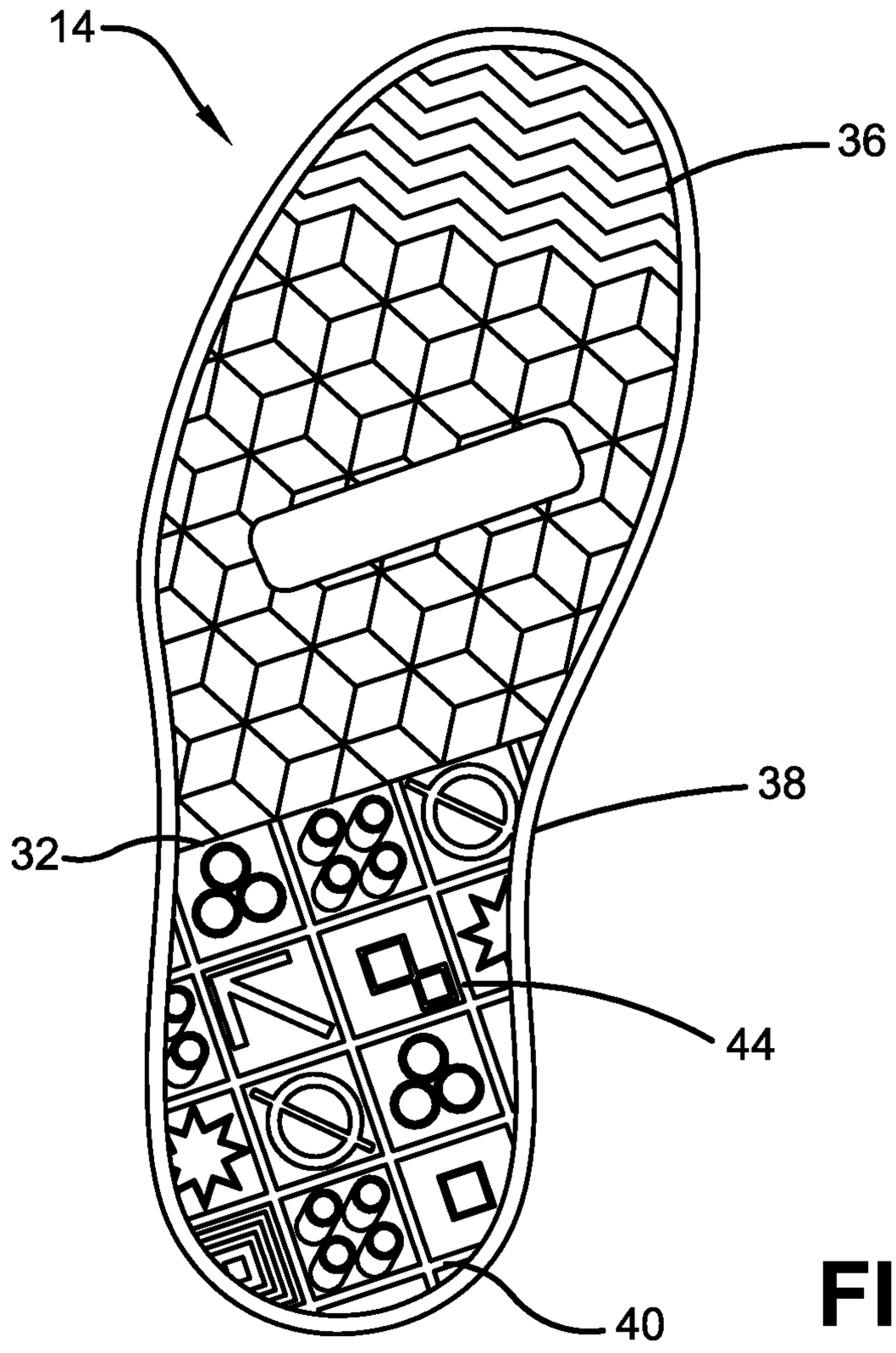

FIG. 3

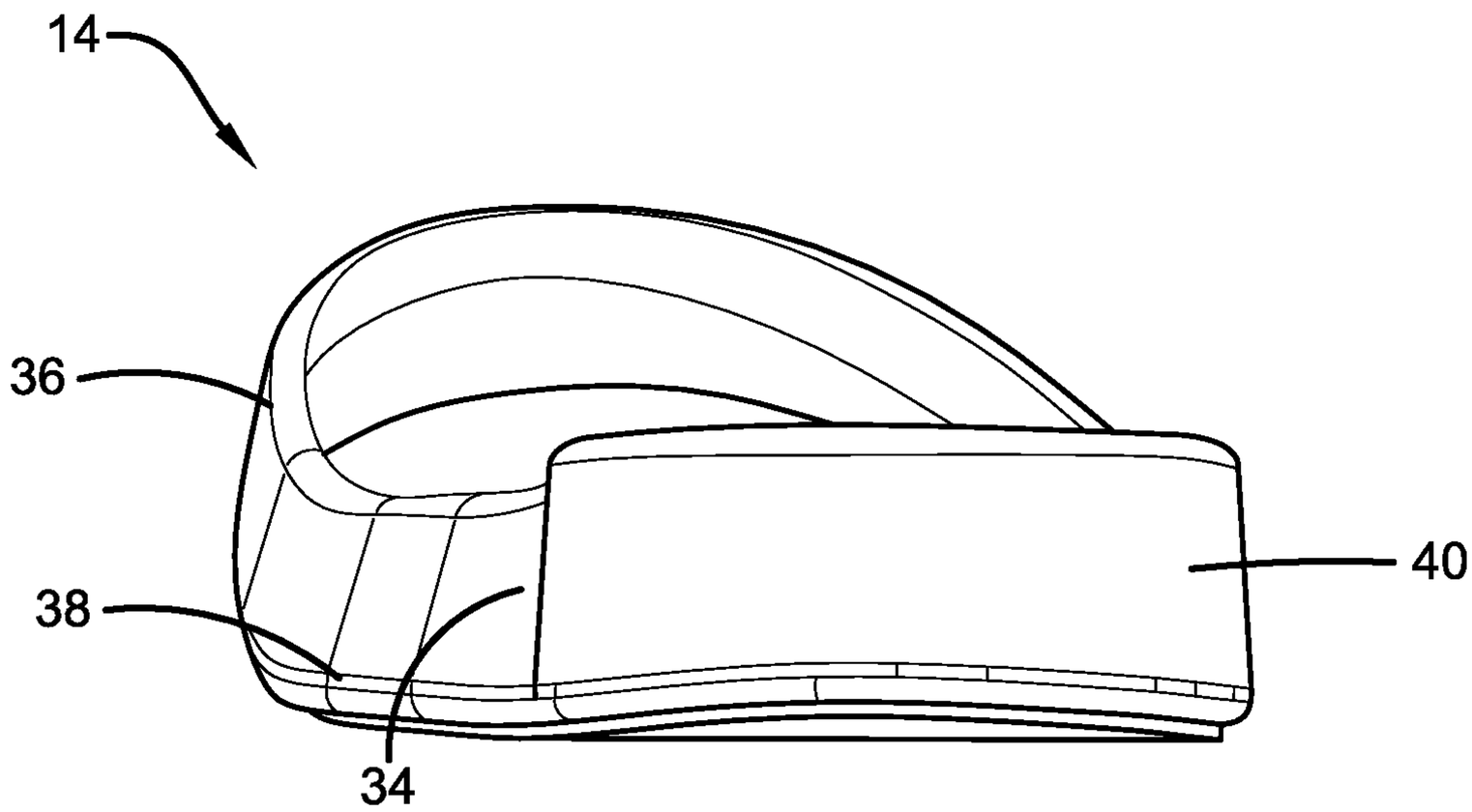

FIG. 4

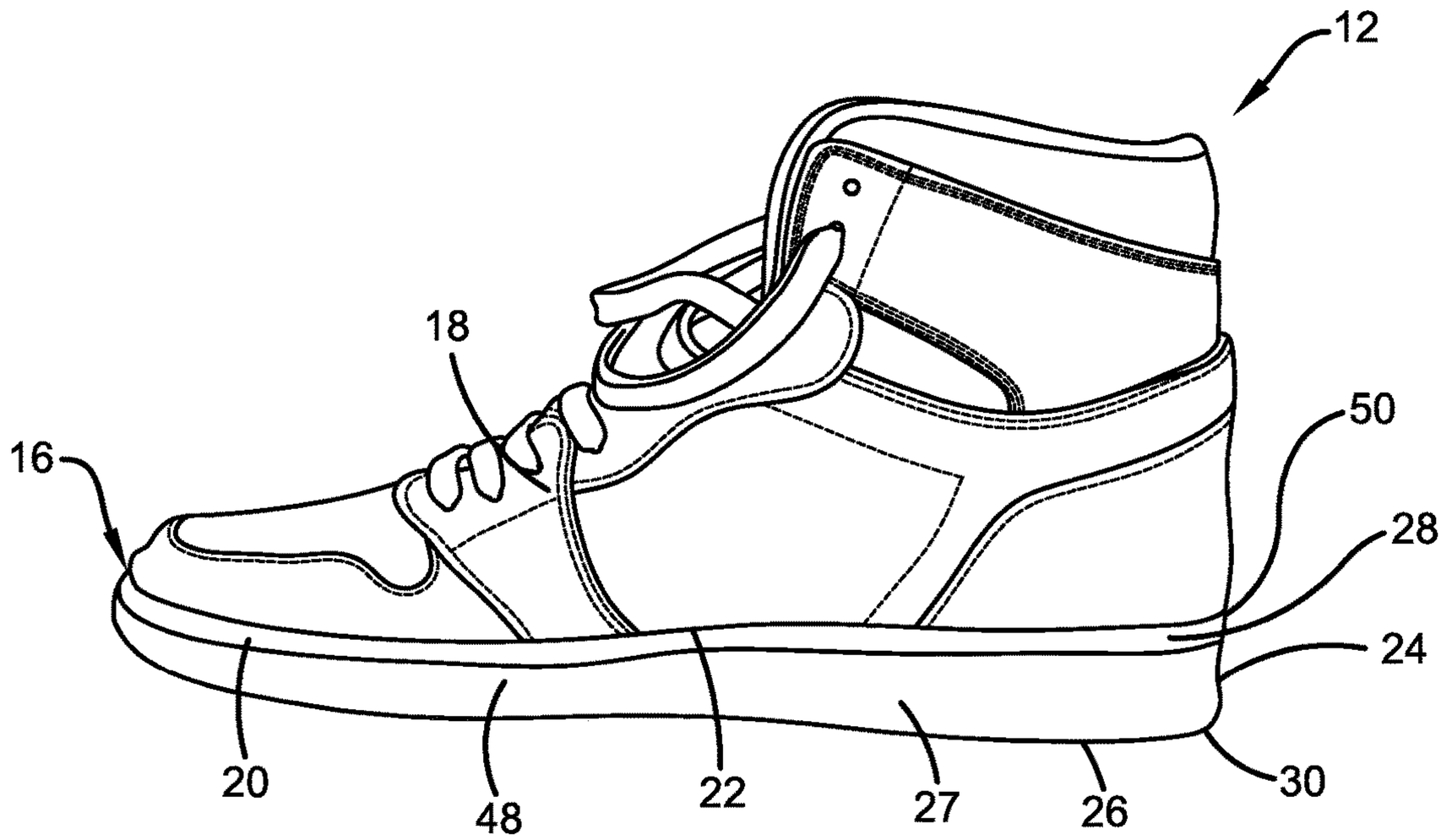

FIG. 5

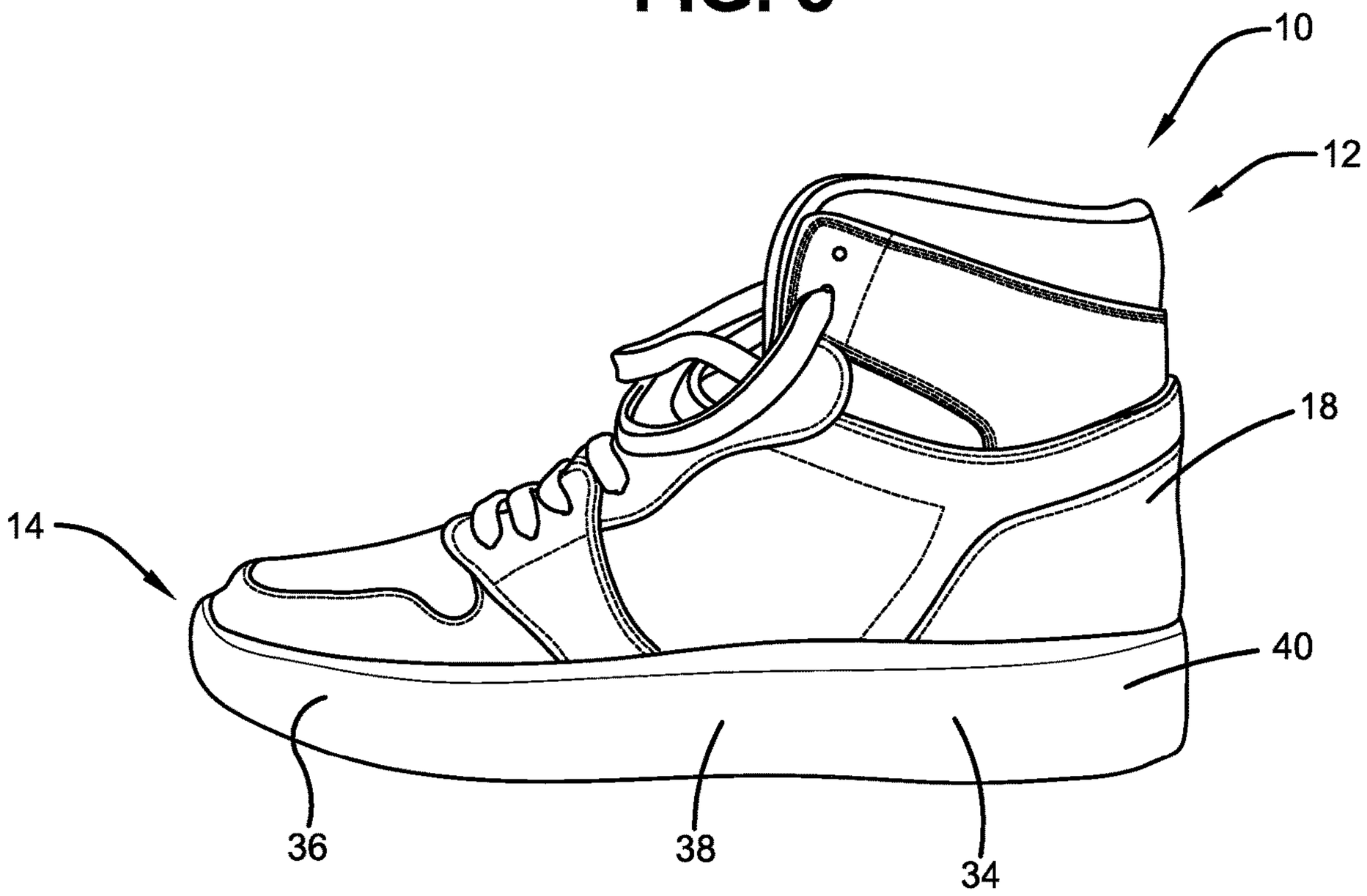

FIG. 6

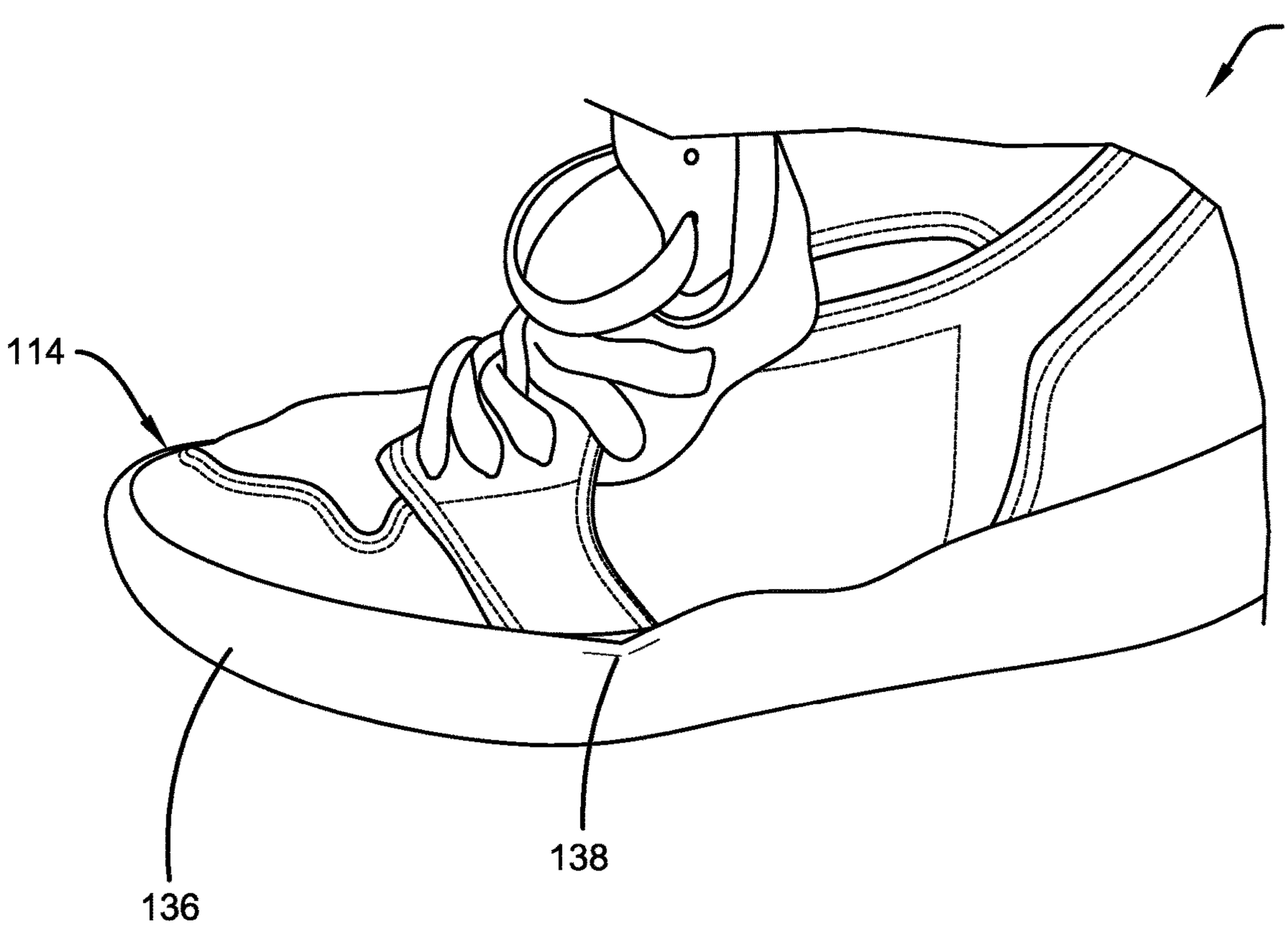

FIG. 7

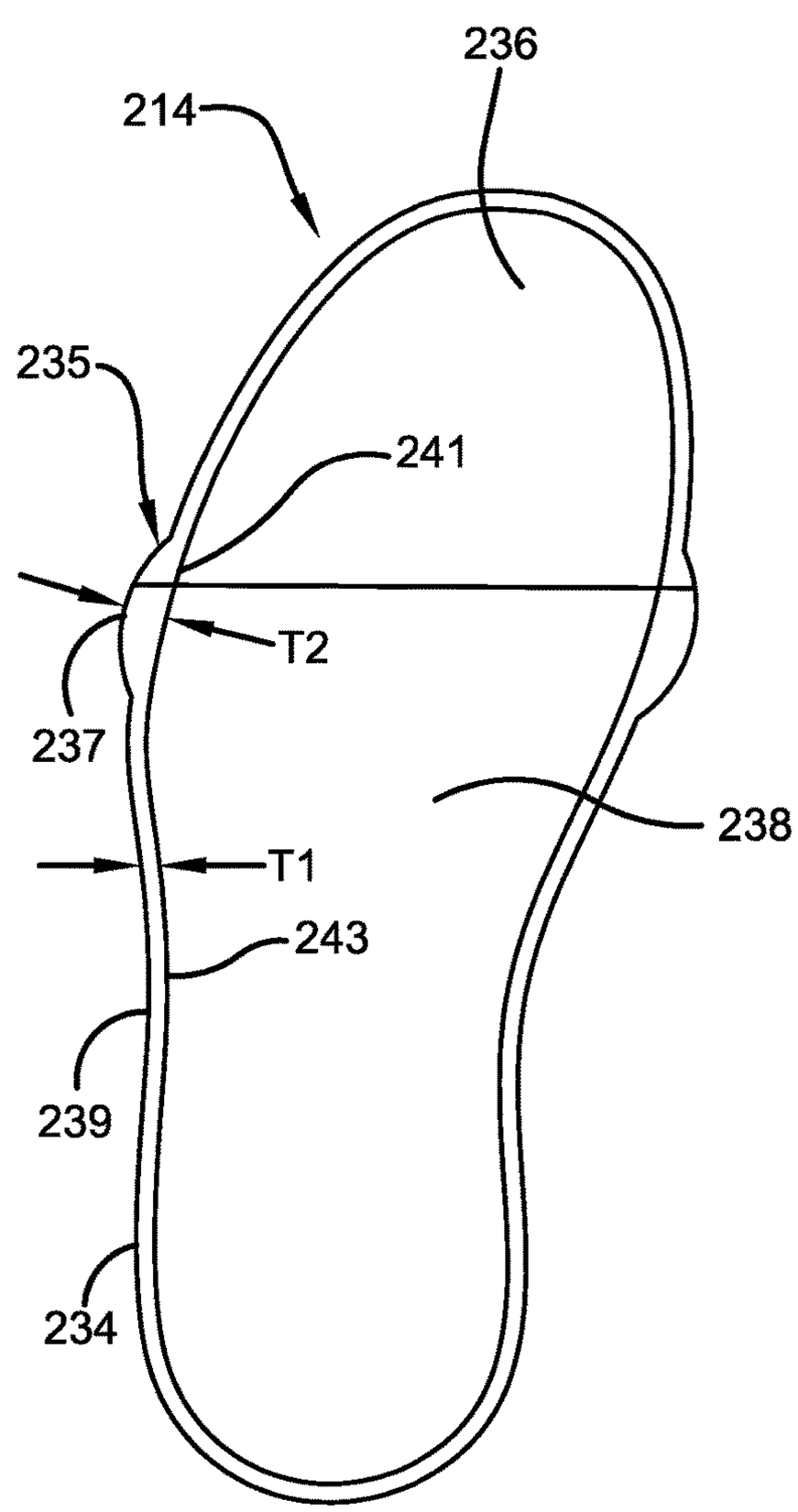
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FIG. 8

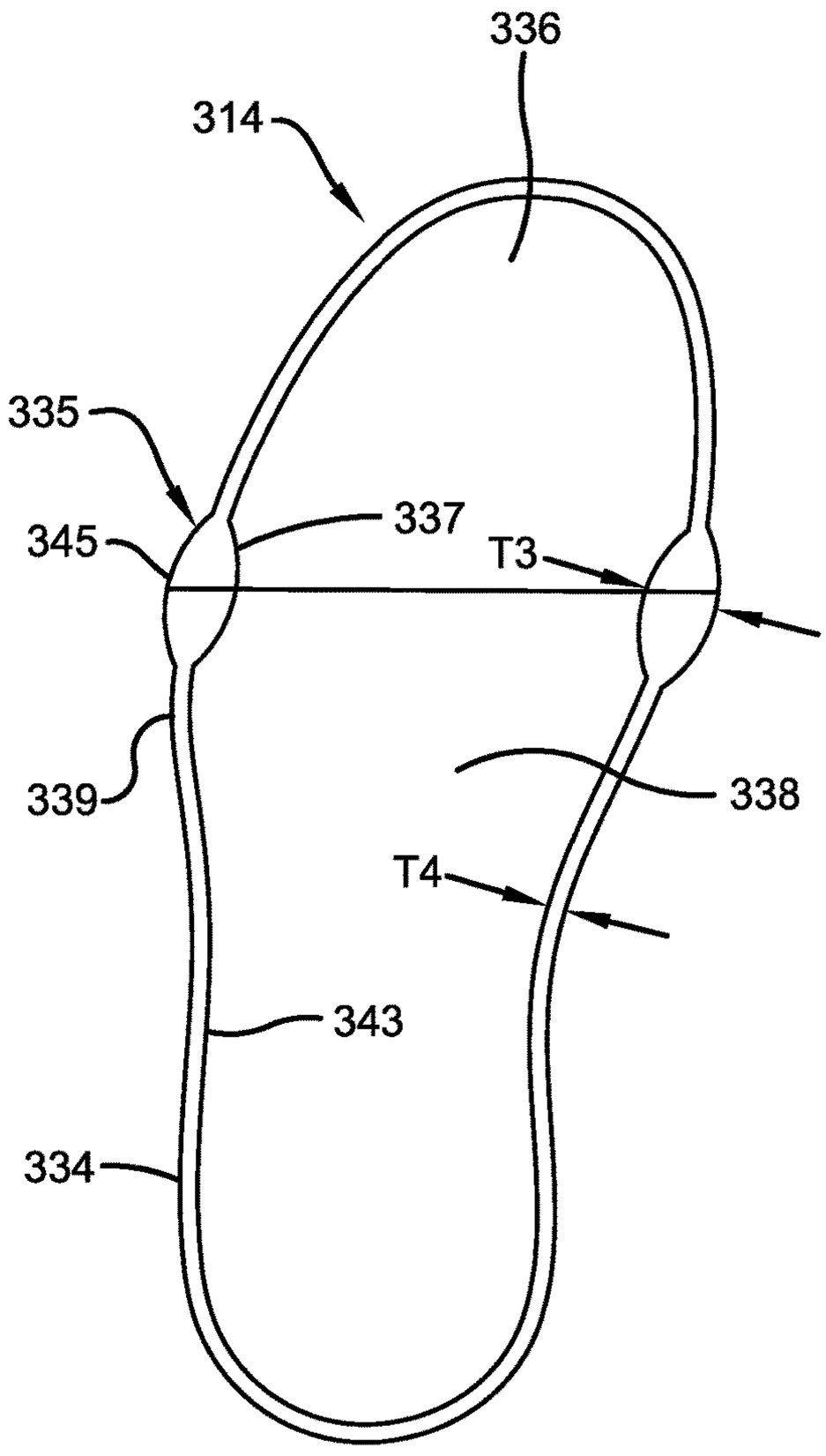
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FIG. 9

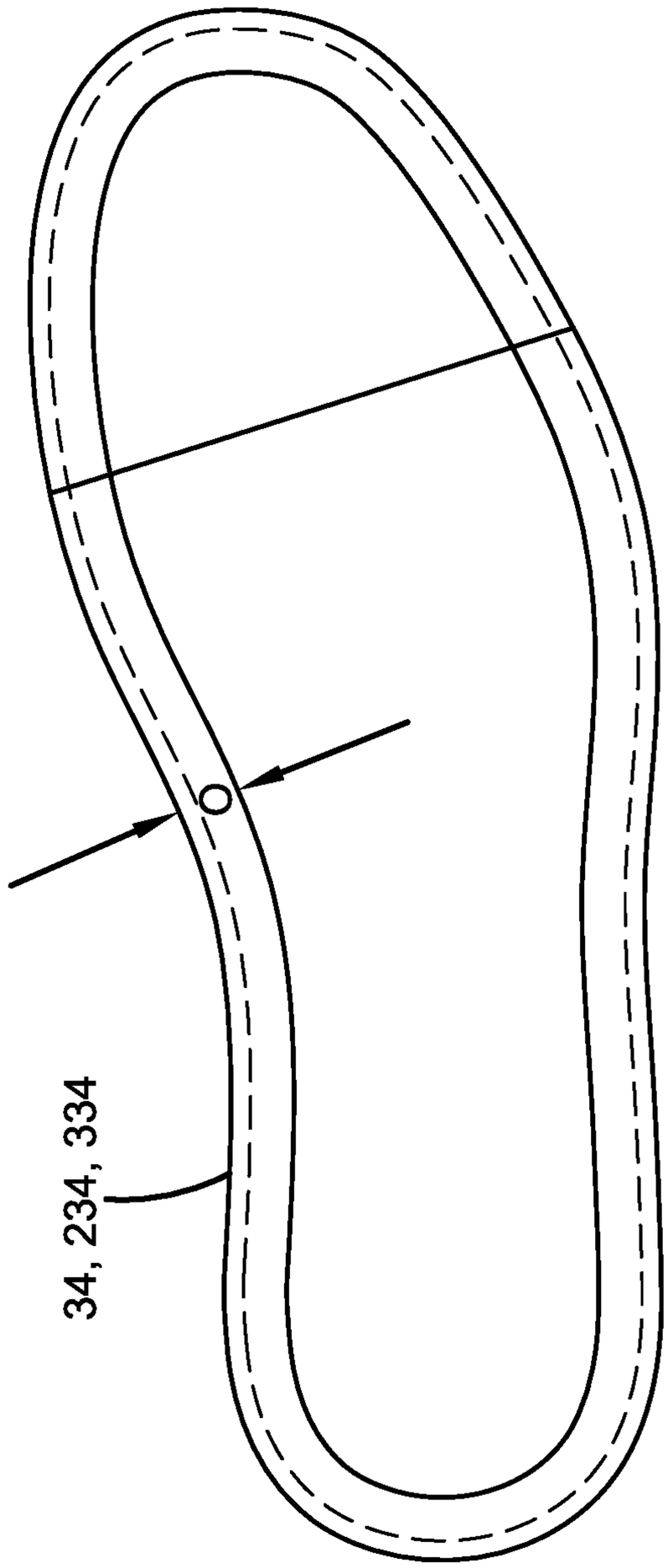

FIG. 10

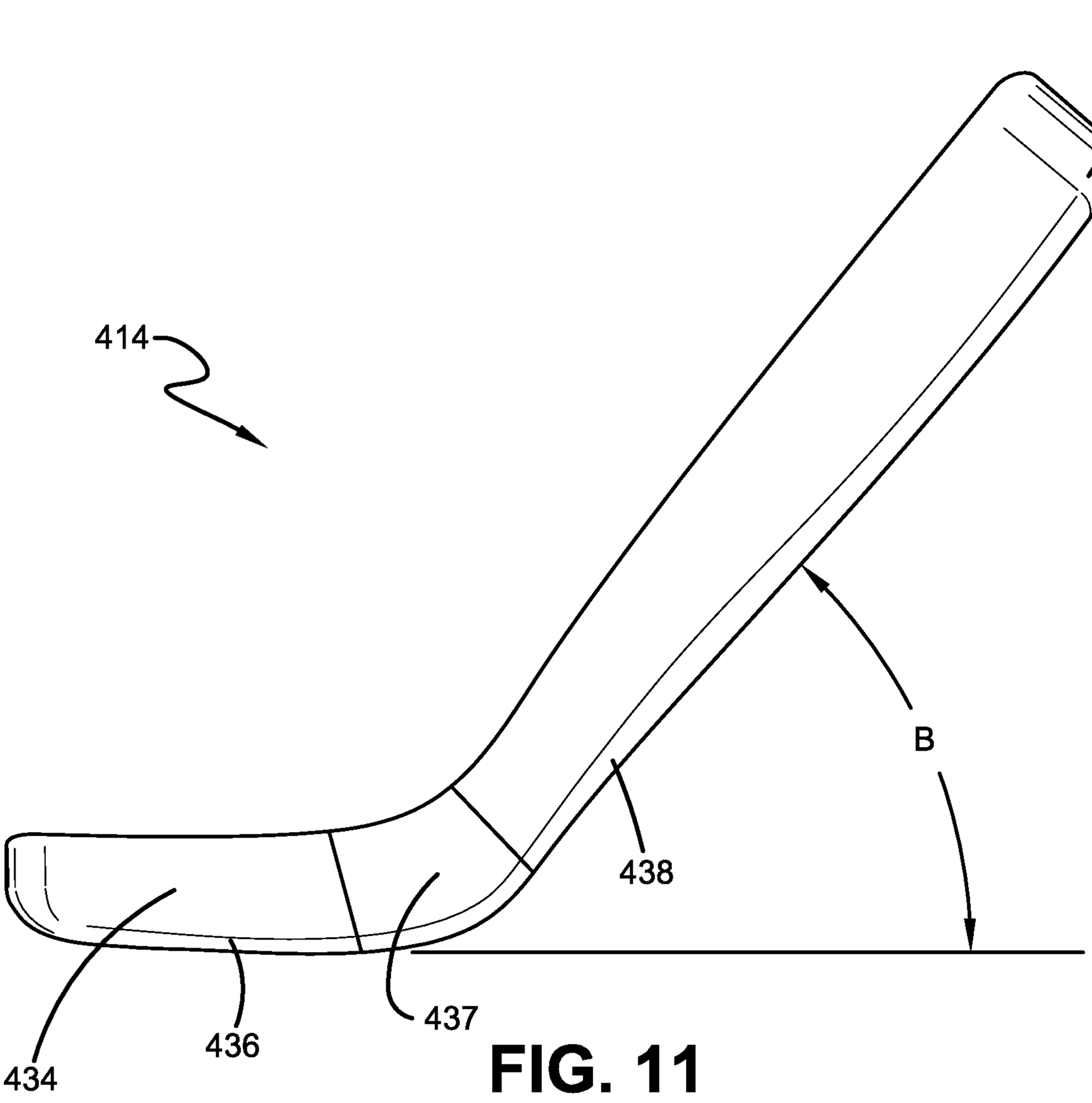

FIG. 11

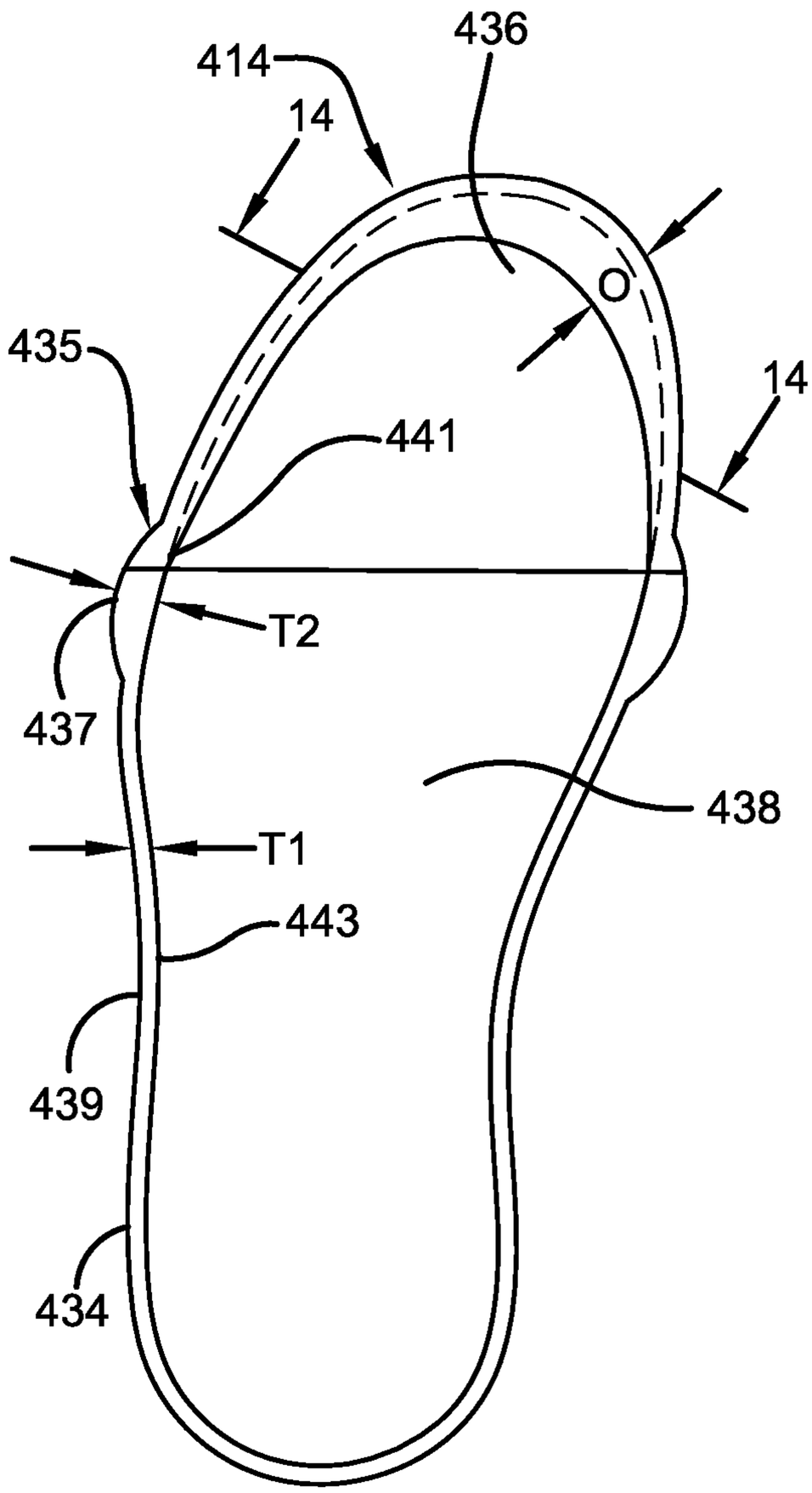

FIG. 12

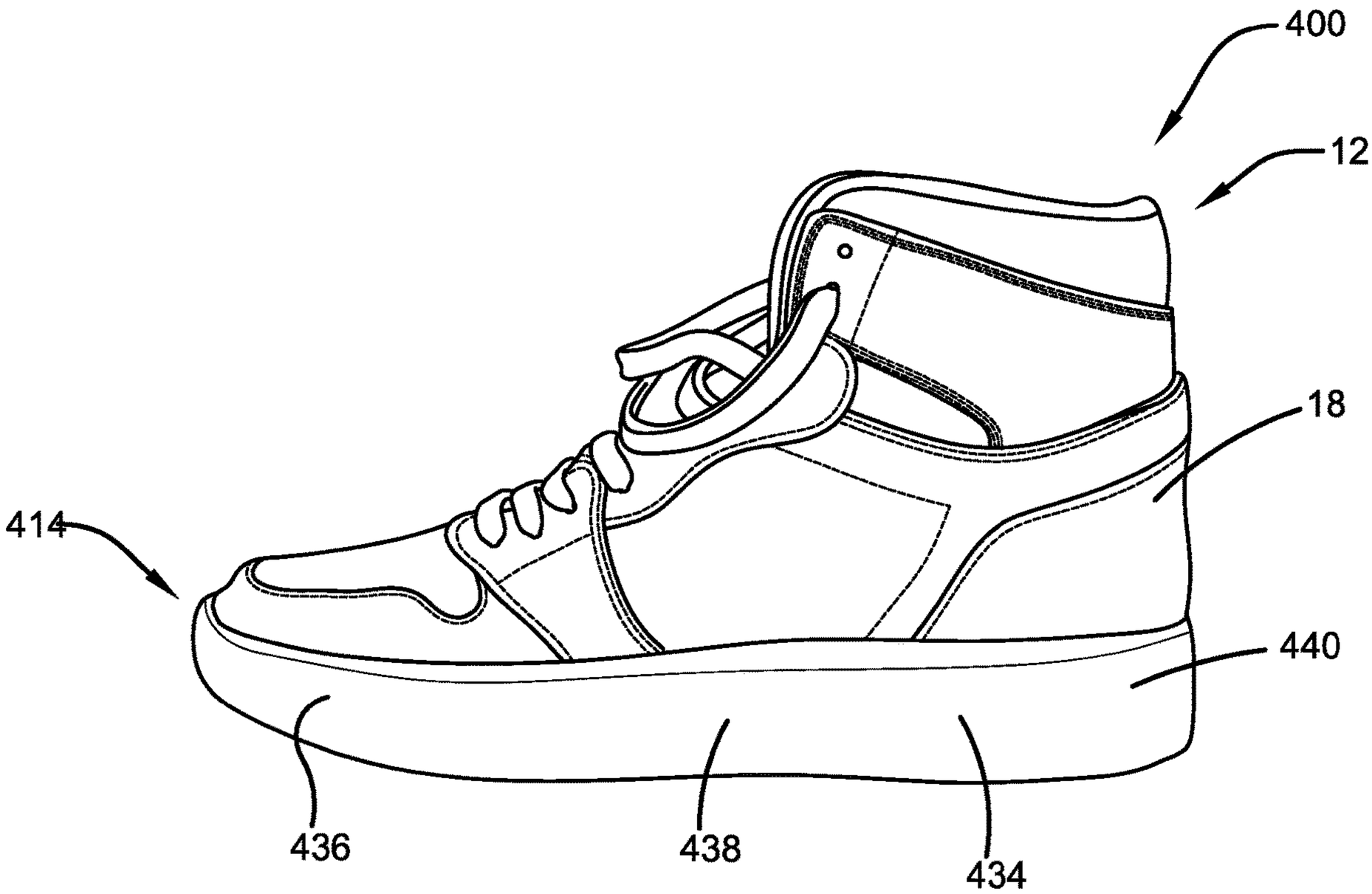

FIG. 13

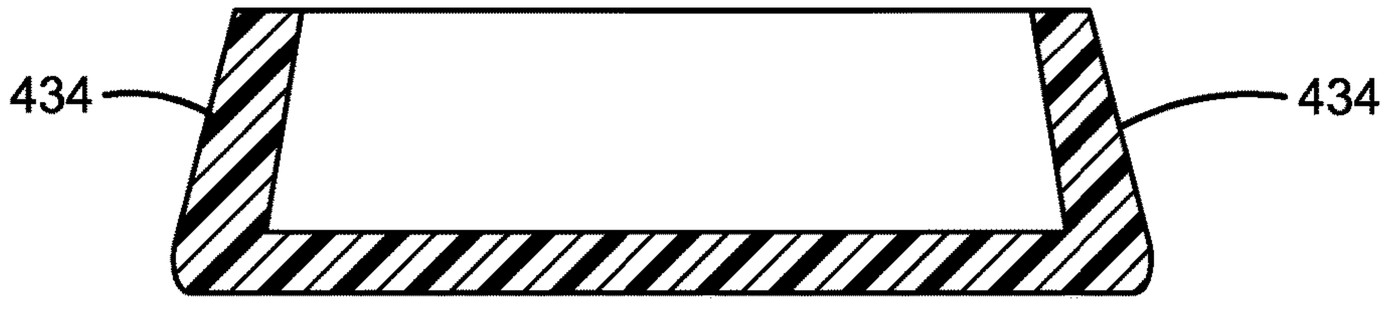

FIG. 14

SHOE SOLE COVER

FIELD

This application relates generally to footwear and accessories, and in particular a sole cover for a shoe.

BACKGROUND

Shoes can be easily damaged due to ordinary wear and tear, especially at vulnerable areas on the shoes such as the bottom and sides. Covers can be attached to the shoe to protect it. Often such covers may not be aesthetically pleasing or durable and may cover artistic shoes designs on the exterior surface. One example of a cover has peel and stick layers that can be attached to and removed from the bottom of the sole of the shoes. However, the peel and stick cover requires adhesive to attach the cover to the shoe and cannot be reliably removed and reattached.

Shoe covers may benefit from improvements.

SUMMARY

In one aspect of the present invention, an apparatus is provided that includes a sole cover. The sole cover is configured to be removably attached to the sole of a shoe to cover the sole of the shoe. The sole cover includes a first covering section and a second covering section, where the first covering section is configured to cover the sole of the shoe at the toe box portion of the shoe. The second covering section is configured to cover the sole of the shoe at the waist portion of the shoe. The first covering section angles upwardly and away from the second covering section at an angle relative to the second covering section when the second covering section lies flat on a horizontal plane in an undeformed state. The sole cover is of a sufficient elasticity that enables the first covering section to bend downwardly when the sole cover is attached to the sole of the shoe. The angle and elasticity are of sufficient values to urge the sole cover against the bottom of the sole of the shoe to help secure the sole cover to the sole of the shoe when the sole cover is attached to the sole of the shoe.

In another aspect of the present invention, an apparatus is provided. The apparatus includes a shoe. The shoe includes a sole, a toe box portion, a waist portion, and a heel portion. The apparatus further includes a sole cover. The sole cover is removably attached to the sole of the shoe to cover the sole of the shoe. The sole cover includes a first covering section and a second covering section. The first covering section covers the sole of the shoe at the toe box portion of the shoe. The second covering section is configured to cover the sole of the shoe at the waist portion and the heel portion of the shoe. The first covering section angles upwardly and away from the second covering section at an angle relative to the second covering section when the second covering section lies flat on a horizontal plane in an undeformed state. The sole cover is of a sufficient elasticity that enables the first covering section to bend downwardly when the sole cover is attached to the sole of the shoe. The angle and elasticity are of sufficient values to urge the sole cover against the bottom of the sole of the shoe to help secure the sole cover to the sole of the shoe when the sole cover is attached to the sole of the shoe.

Other aspects of the disclosed invention will become apparent from the following detailed description, the accompanying drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are included to provide a further understanding of the invention and are incorporated into and constitute a part of the specification. They illustrate one embodiment of the invention and, together with the description, serve to explain the principles of the invention.

FIG. **1** is a top and rear perspective view of the sole cover according to a first embodiment of the present invention.

FIG. **2** is a left side view of the sole cover of FIG. **1**.

FIG. **3** is a bottom view of the sole cover of FIG. **1** when the front covering section, the middle covering section, and rear covering section all lie flat on a horizontal plane.

FIG. **4** is a rear and right-side perspective view of the sole cover of FIG. **1**.

FIG. **5** is a right-side perspective view of a shoe that the sole covers of FIG. **1** and FIGS. **7-11** may be attached according to the embodiments of the present invention.

FIG. **6** is a right-side perspective view of the sole cover of FIG. **1** attached to the shoe of FIG. **5** according to the first embodiment of the present invention.

FIG. **7** is a right side perspective view of a portion of the sole cover attached to the shoe of FIG. **5** in which the front covering section of the sole cover does not angle upwardly and forwardly relative to the middle covering section of the sole cover according to a second embodiment of the present invention.

FIG. **8** is a top view of the sole cover according to a third embodiment of the present invention.

FIG. **9** is a top view of the sole cover according to a fourth embodiment of the present invention.

FIG. **10** is a top view of the sole cover that shows an offset of the side wall that may be included in one or more of the embodiments of the present invention.

FIG. **11** is a side view of the sole cover according to a fifth embodiment of the present invention.

FIG. **12** is a top view of the sole cover of FIG. **11**.

FIG. **13** is a right-side perspective view of the sole cover of FIG. **11** attached to the shoe of FIG. **5** according to the fifth embodiment of the present invention.

FIG. **14** is a sectional view taken along line **14-14** of FIG. **12**.

DETAILED DESCRIPTION

It will be readily understood that the components of the embodiments as generally described and illustrated in the figures herein, may be arranged and designed in a wide variety of different configurations in addition to the described example embodiments. Thus, the following more detailed description of the example embodiments, as represented in the figures, is not intended to limit the scope of the embodiments, as claimed, but is merely representative of example embodiments.

Furthermore, the described features, structures, or characteristics may be combined in any suitable manner in one or more embodiments. In the following description, numerous specific details are provided to give a thorough understanding of embodiments. One skilled in the relevant art will recognize, however, that the various embodiments can be practiced without one or more of the specific details, or with other methods, components, materials, etc. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obfuscation. The following description is intended only by way of example, and simply illustrates certain example embodiments.

Throughout the present description, the terms "upper", "lower", "top", "bottom", "left", "right", "front", "forward", "rear", and "rearward" shall define directions or orientations with respect to the shoe and sole cover as illustrated in FIG. **6**, which shows a right side perspective view of the shoe with the sole cover on it. It will be understood that the spatially relative terms "upper", "lower", "top", "bottom", "left", "right", "front", "forward", "rear", and "rearward" are intended to encompass different orientations of the shoe in use or operation in addition to the orientation depicted in the figures. For example, if the shoe in the figures is turned over, elements described as "upper" elements or features would then be "lower" elements or features.

Referring to FIGS. **1-6**, a first exemplary embodiment is provided. This first embodiment comprises an apparatus **10** (FIG. **6**) that comprises a shoe **12** (FIGS. **5** and **6**) which may be worn by a user and a sole cover **14** removably attached to the shoe **12**. Referring to FIG. **5**, the shoe **12** includes a sole **16**, an upper **18**, a toe box portion **20**, a waist portion **22**, and a heel portion **24**. The sole **16** may be a one-layer type or may comprise multiple layers. The sole **16** may be made of suitable materials such as natural rubber, leather, polyurethane and/or PVC compound. The sole **16** may include an outsole **26**, a midsole **27**, and an insole **28**. The outsole **26** is the outermost layer and generally covers the bottom of the shoe **12**. The outsole has a bottom surface **30** that contacts the ground. The midsole **27** extends along the side periphery of the shoe and is positioned between the insole **28** and the outsole **26**. The insole **28** is attached on the top of the midsole **27** and functions to cradle the foot.

The insole **28** is also attached to the bottom of the upper **18** by a welt (not shown). The upper **18** covers the upper foot of the wearer and is made of a durable and high strength material. The upper **18** is aesthetically designed to make the shoe attractive. The shoe **12** can be divided into three portions along the longitudinal axis of the shoes. These three portions are the toe box portion **20**, the waist portion **22**, and the heel portion **24**. The toe box portion **20** of the shoe **12** is located at the front of the shoe **12** and covers the toes of the wearer to protect them. The toe box portion **20** is constructed to add strength to the front of the shoe **12**, since the front of shoe **12** receives considerable stress. The heel portion **24** of the shoe **12** is at the rear of the shoe **12** to support the rear part of the shoe **12**. The waist portion **22** is located between the heel portion **24** and the toe box portion **20** and protects the arch and in step of the foot of the wearer. In essence, the toe box portion **20** corresponds to the front shoe portion, the waist portion **22** corresponds to the middle shoe portion, and the heel portion **24** corresponds to the rear shoe portion.

Referring to FIGS. **1** to **4**, the removable sole cover **14** is integrally formed in one piece by injection molding and includes a bottom wall **32** (FIG. **3**) and an upstanding side wall **34** (FIG. **1**) extending upwardly form the peripheral edge of the bottom wall **32**. The side wall **34** extends continuously and unbroken around the periphery of the bottom wall **32** of the sole cover **14**. The bottom wall **32** of the sole cover **14** has a bottom tread surface **44** (FIG. **3**) that may have various designs. The sole cover **14** is made of an elastic material such as thermoplastic polyurethane (TPU). The sole cover **14** may include a silicon-based material and/or additives to increase its elasticity. The TPU may have a modulus of elasticity in the range between 0.25 GPa and 10 GPa. The sole cover **14** may also include additives that attenuate discoloration due to the elements. Additives may be a combination of Antioxidants, Hindered Light Amine Stabilizers (HALS), Ultraviolet (UV) Absorbers, and/or Quenchers. Another additive may be a phosphorescent and/or a pigment for aesthetic purposes.

The sole cover **14** includes a front covering section **36**, a middle covering section **38**, and a rear covering section **40**. The front covering section **36** covers the sole of the shoe **12** at the toe box portion **20**. The middle covering section **38** covers the sole **16** of the shoe **12** at the waist portion **22**. The rear covering section **40** covers the sole **16** of the shoe **12** at the heel portion **24** of the shoe **12**. In this embodiment, the front covering section **36** has a length approximately equal to a third of the length of the sole cover **14**. The sole cover **14** is shaped to match the shape of the sole **16** of the shoe **12** except for the toe box portion **20**, which will be explained further. As illustrated in FIG. **2**, in the undeformed state of the sole cover **14**, the front covering section **36** angles upwardly and forwardly relative to the middle covering section **38** at an angle A between 5 and 80 degrees when the middle covering section **38** lies flat on a horizontal plane. Alternatively, the angle A may be at other values. The angle A is also more than the angle between the toe box portion **20** and the waist portion **22** of the shoe **12**. For example, FIG. **2** shows that the angle A is 22.8 degrees and FIG. **5** shows that the angle between the toe box portion **20** and the waist portion **22** of the shoe **12** is near zero. In essence, the front covering section **36** angles upwardly relative to the toe box portion **20** of the shoe **12** when the waist portion **22** and the middle covering section **38** lie flat on a horizontal plane in their undeformed state with their bottoms facing the horizontal plane.

To install the sole cover **14** on the shoe **12**, the sole cover **14** is placed beneath the shoe and stretched while the sole cover **14** slips over the sole **16** of the shoe **12** until the bottom surface **30** of the sole **16** of the shoe **12** engages top surface **46** (FIG. **1**) of the bottom wall **32** of the sole cover **14**. The top surface **46** and also the rest of the inner surface of the sole cover **14** may be a rough or friction causing surface such as treads or grooves molded therein to further improve the attachment of the sole **16** of the shoe **12** to the sole cover **14**. Once the bottom surface **30** engages the top surface **46**, the side wall **34** of the sole cover **14** is pulled at or slightly above the height of sole **16**. Then, the pulling force is removed and the sole cover **14** is released. When completely installed and released, the side wall **34** covers the entire side **48** of the sole **16** of the shoe **12**, but does not cover any portion of the upper **18** of the shoe **12** as shown in FIG. **6**. That is, the side wall **34** extends to a top rim **50** (FIG. **5**) of the sole **16** but does not extend past the top rim **50** of the sole **16**. Also, the bottom wall **32** of the sole cover **14** covers the bottom surface **30** of the shoe **12** to protect the sole **16** from abrasion, wear, and tear while simultaneously enhancing the aesthetics of the shoe **12**. Since the angle A is more than the angle between the toe box portion **20** and the waist portion **22** of the shoe **12** and the sole cover **14** is substantially more elastic than the sole **16**, the front covering section **36** bends downwardly when the shoe **12** is installed in the sole cover **14**. Due to the elasticity of the sole cover **14**, the bended front covering section **36** is urged upwardly, by the elastic force at the bend region, against the bottom surface **30** of the shoe **12**, which is substantially less elastic.

The angle A and elasticity of the sole cover **14** are of sufficient values to enable the sole cover **14** to urge the bottom wall **32** of the sole cover **14** (at the front covering section **36**) upwardly against the bottom surface **30** of shoe **12** to tightly fit and secure the sole cover **14** on the shoe **12** without the use of adhesive to secure the sole cover **14** to the shoe **12**. The angle and elasticity of the sole cover **14** are also of sufficient values to urge the bottom wall **32** of the sole

cover **14** (at the front covering section **36**) upwardly against the bottom surface **30** of the shoe **12** to tightly fit and secure the sole cover **14** on the shoe **12** without the need for the sole cover **14** to extend over the top of the upper **18** at the toe box portion **20** to secure the sole cover **14** to the shoe **12**. Thus, the sole cover **14** does not obscure the top of the upper **18** of the shoe **12**, thereby maintaining the aesthetic appearance of the upper **18** of the shoe **12**. In essence, upon being assembled to the shoe **12**, the sole cover **14** functions by using a combination of a preloaded force via the curvature/angle, friction, and elasticity to remain attach to the sole **16** of the shoe **12**. The sole cover **14** may be removed from the shoe **12** by a user grasping the side wall **34** and stretching the side wall **34** outwardly away from the shoe **12** to enable the shoe **12** to slip out of the sole cover **14** when pulled out by a user.

FIG. **7** shows a second embodiment of the sole cover **114** of the present invention on the shoe **12**. In this second embodiment, the sole cover removably attaches to the shoe sole **16**. In the undeformed state of the sole cover **114**, the front covering section **136** does not angle upwardly and forwardly relative to the middle covering section **138**. So, this version does not account for the inherent deformation of the sole cover that occurs during the act of walking. Specifically, as illustrated in FIG. **7**, bowing of the sole cover occurs in which the sides of the sole cover **114** spread outwardly when the heel portion **24** of the shoe **12** is lifted up. By having the front covering section **136** angle upwardly relative to the toe box portion **20** of the shoe **12** as illustrated in the first embodiment of FIGS. **1-6**, the bowing was surprisingly substantially reduced or eliminated. In all other aspects, the second embodiment is similar to that of the first embodiment of the present invention.

FIG. **8** shows a third embodiment of the present invention. In this embodiment, the sole cover **214** has a side wall **234** with a thickened area **235** at or near the junction of front and middle covering sections **236**, **238** where the bending occurs. The thickened area **235** has a thickness T**2** or width that is greater than the thickness T**1** of the remaining section of the side wall **234**. In particular, the thickened area **235** has an outer projection **237** that extends radially outwardly beyond an outer side **239** of the remaining section of the side wall **234**. An inner side **241** of the thickened area **235** is flushed with an inner side **243** of the remaining section of the side wall **234**. The thickened area **235** prevents or mitigates the bowing of the sole cover **214**. FIG. **8** shows one example of the thickened area **235**, but it should be known that the thickened area **235** can take many forms or shapes. The increase in thickness may happen gradually or rapidly. The thickened area **235** may also be a thick line, circle, triangle, polygon or other suitable shape. The thickened area **235** will not necessarily involve an entire portion of the sidewall being made thicker, although it may. The thickness T**2** of the thickened area **235** may be 5 percent or more than the thickness T**1** of the remaining section of the side wall **234**. In all other aspects, the third embodiment is similar to that of the first embodiment of the present invention.

FIG. **9** shows the fourth embodiment of the present invention. In this embodiment, the sole cover **314** has a side wall **334** with a thickened area **335** at or near the junction of front and middle covering sections **336**, **338** where the bending occurs. The thickened area **335** has a thickness T**3** or width that is greater than the thickness T**4** of the remaining section of the side wall **334**. In particular, the thickened area **335** has an inner projection **337** that extends radially inwardly beyond an inner side **343** of the remaining section of the side wall **334**. An outer side **345** of the thickened area **335** is flushed with an outer side **339** of the remaining section of the side wall **334**. The thickened area **335** prevents or mitigates the bowing of the sole cover **314**. FIG. **9** shows one example of the thickened area **335**, but it should be known that the thickened area **335** can take many forms or shapes. The increase in thickness may happen gradually or rapidly. The thickened area **335** may also be a thick line, circle, triangle, polygon or other suitable shape. The thickened area **335** will not necessarily involve an entire portion of the sidewall being made thicker, although it may. The thickness T**3** of the thickened area **335** may be 5 percent or more than the thickness T**4** of the remaining section of the side wall **234**. In all other aspects, the fourth embodiment is similar to that of the first embodiment of the present invention.

In the one or more embodiments, the side wall **34**, **234**, or **334** may bend or slope radially inwardly as it extends upwardly as shown in FIG. **10**. In essence, the top perimeter of the side wall **34**, **234**, or **334** is smaller than the bottom perimeter of the side wall **34**, **234**, or **334** resulting in an offset O. This offset O is defined as the horizontal distance (when the sole cover lies flat on a horizontal plane) between the inner top edge of the side wall and the outer bottom edge of the side wall. The offset may be constant or arbitrary around the perimeter of the sidewall. In other words, there may be no offset at the heel of the shoe, but sufficient (constant or non-constant) offset at or near the toe box. This will act as an additional source of pre-tension to help to prevent bowing and additionally will help the device fit on the shoe better.

FIGS. **11** to **14** show a fifth embodiment of the present invention. This fifth embodiment comprises an apparatus **400** (FIG. **13**) that comprises the shoe **12** which may be worn by a user and a sole cover **414** removably attached to the shoe **12**. The sole cover **414** is made of an elastic material such as thermoplastic polyurethane (TPU). The sole cover **414** may include a silicon-based material and/or additives to increase its elasticity. The TPU may have a modulus of elasticity in the range between 0.25 GPa and 10 GPa. The sole cover **414** may also include additives that attenuate discoloration due to the elements. Additives may be a combination of Antioxidants, Hindered Light Amine Stabilizers (HALS), Ultraviolet (UV) Absorbers, and/or Quenchers. Another additive may be a phosphorescent and/or a pigment for aesthetic purposes.

The sole cover **414** includes a front covering section **436**, a middle covering section **438**, and a rear covering section **440**. The front covering section **436** covers the sole of the shoe **12** at the toe box portion **20**. The middle covering section **438** covers the sole **16** of the shoe **12** at the waist portion **22**. The rear covering section **440** covers the sole **16** of the shoe **12** at the heel portion **24** of the shoe **12**. In this embodiment, the front covering section **436** has a length approximately equal to a third of the length of the sole cover **414**. The sole cover **414** is shaped to match the shape of the sole **16** of the shoe **12** except for the toe box portion **20**, which will be explained further. As illustrated in FIG. **11**, the sole cover **414** is pre-deformed such that middle and rear covering sections **438**, **440** angle upwardly from a front covering section **436** going in the rearward direction to form an angle B relative to the front covering section **436** when the front covering section **436** lies flat on a horizontal plane as illustrated in FIG. **11**. In other words, the sole cover **414** may be pre-deformed such that the front cover section **436** angles upwardly from the middle and rear covering sections **438**, **440** going in the forward direction to form the angle B relative to the middle and rear covering sections **438**, **440**

when the middle and rear cover sections **438**, **440** lie flat on a horizontal plane. This design of the pre-deformed sole cover **414** mitigates the creases that occur on the sole cover **414** due to buckling of the critical sections during walking. The pre-deformed sole cover **414** is designed to fit perfectly (no clearance between the sole of the shoe and sole cover) onto the sole which is deformed during the walking cycle. The angle B of deformation is determined by the maximum angle the shoe would deform in a normal walking regime. This angle B is obtained by scanning the deformed sole and it can vary for different shoe designs, but it may be somewhere in the range of 5 to 80 degrees. In one example, the angle B is 45 degrees.

The section of the sole cover **414** that buckles is reinforce with thicker material as shown in FIG. **12** to negate the effects of thinning of the material from the stretching of the sole cover to fit the deformed sole with zero clearance. In this exemplary embodiment, the sole cover **414** has a side wall **434** with a thickened area **435** at or near the junction of front and middle covering sections **436**, **438** where the bending occurs. The thickened area **435** has a thickness T**2** or width that is greater than the thickness T**1** of the remaining section of the side wall **434**. In particular, the thickened area **435** has an outer projection **437** that extends radially outwardly beyond an outer side **439** of the remaining section of the side wall **434**. An inner side **441** of the thickened area **435** is flushed with an inner side **443** of the remaining section of the side wall **434**. The thickened area **435** prevents or mitigates the bowing of the sole cover **414**. FIGS. **11** and **12** show one example of the thickened area **435**, but it should be known that the thickened area **435** can take many forms or shapes. The increase in thickness may happen gradually or rapidly. The thickened area **435** may also be a thick line, circle, triangle, polygon, or other suitable shapes. The thickened area **435** will not necessarily involve an entire portion of the sidewall being made thicker, although it may. The thickness T**2** of the thickened area **435** may be 5 percent or more than the thickness T**1** of the remaining section of the side wall **434**.

In one example, the increase in thickness may be approximately 0.1 to 90 mm to negate the effects of this thinning when the sole cover **414** stretches when the front covering section **436**, middle covering section **438**, and rear covering section **440** are all laid flat on a relatively flat ground. The side wall **434** of the sole cover also has an offset O at the front covering section **36** for maximal fit and deformation reduction as seen in FIGS. **12** and **14**. This offset O is defined as the horizontal distance (when the sole cover **414** lies flat on a horizontal plane) between the inner top edge of the side wall **434** and the outer bottom edge of the side wall **434**. The offset O may be 1 to 40 percent of the width of the shoe cover. There may or may not be an offset of the side wall at the middle and rear covering sections **438**, **440** of the sole cover **414**.

When the sole cover **414** is installed on the shoe **12**, the side wall **434** covers the entire side **48** of the sole **16** of the shoe **12**, but does not cover any portion of the upper **18** of the shoe **12** as shown in FIG. **13**. That is, the side wall **434** extends to a top rim **50** (FIG. **5**) of the sole **16** but does not extend past the top rim **50** of the sole **16**. The sole cover **414** also includes the bottom wall **32** having the top surface **46** similar to that of the first embodiment. The top surface **46** and also the rest of the inner surface of the sole cover **414** may be a rough or friction causing surface such as treads or grooves molded therein to further improve the attachment of the sole **16** of the shoe **12** to the sole cover **414**. Also, the bottom wall **32** of the sole cover **14** covers the bottom surface **30** of the shoe **12** to protect the sole **16** from abrasion, wear, and tear while simultaneously enhancing the aesthetics of the shoe **12**.

Since the angle B is more than the angle between the toe box portion **20** and the waist portion **22** of the shoe **12** and the sole cover **414** is substantially more elastic than the sole **16**, the front covering section **436** bends downwardly when the shoe **12** is installed in the sole cover **414**. Due to the elasticity of the sole cover **414**, the bended front covering section **436** is urged upwardly, by the elastic force at the bend region, against the bottom surface **30** of the shoe **12**, which is substantially less elastic. The angle B and elasticity of the sole cover **14** are of sufficient values to enable the sole cover **414** to urge the bottom wall **32** of the sole cover **414** (at the front covering section **436**) upwardly against the bottom surface **30** of shoe **12** to tightly fit and secure the sole cover **414** on the shoe **12** without the use of adhesive to secure the sole cover **414** to the shoe **12**. The angle and elasticity of the sole cover **414** are also of sufficient values to urge the bottom wall **32** of the sole cover **414** (at the front covering section **436**) upwardly against the bottom surface **30** of the shoe **12** to tightly fit and secure the sole cover **414** on the shoe **12** without the need for the sole cover **414** to extend over the top of the upper **18** at the toe box portion **20** to secure the sole cover **414** to the shoe **12**. In all other aspects, the fifth embodiment is similar to that of the first embodiment of the present invention. It should be noted that the bottom tread surface **44** may be on the sole covers of all of the embodiments.

While the foregoing written description of the invention enables one of ordinary skill to make and use what is presently considered to be the best mode thereof, those of ordinary skill in the art will understand and appreciate the existence of variations, combinations, and equivalents of the specific embodiment, method, and examples herein. The invention should, therefore, not be limited by the above-described embodiment, method, and examples, but by all embodiments and methods within the scope and spirit of the invention.

What is claimed is:

1. An apparatus comprising:

a sole cover, wherein the sole cover is configured to be removably attached to a sole of a shoe to cover the sole of the shoe, wherein the sole cover includes a first covering section and a second covering section, wherein the first covering section is configured to cover the sole of the shoe at a toe box portion of the shoe, wherein the second covering section is configured to cover the sole of the shoe at a waist portion of the shoe and at a heel portion of the shoe, wherein the first and second covering portions are flat and meet at an angle, wherein the second covering portion is at least one eighth of the length of the sole cover and the first covering portion is at least one eighth of the length of the sole cover, wherein the first covering section angles upwardly and away from the second covering section at the angle relative to the second covering section when the second covering section lies flat on a horizontal plane in an undeformed state, wherein the sole cover is of a sufficient elasticity that enables the first covering section to bend downwardly when the sole cover is attached to the sole of the shoe, wherein the angle is in the range of 26 to 80 degrees, wherein the angle and elasticity are of sufficient values to urge the sole cover against a bottom of the sole of the shoe to help secure the sole cover to the sole of the shoe when the sole cover is attached to the sole of the shoe.

2. The apparatus of claim 1, wherein the sole cover is made of thermoplastic polyurethane.

3. The apparatus of claim 1, wherein the angle is 45 degrees.

4. The apparatus of claim 1, wherein the angle is in the range of 45 to 80 degrees.

5. The apparatus of claim 1, wherein the sole cover includes one or more additives to attenuate discoloration, wherein the one or more additives is an Antioxidant.

6. The apparatus of claim 1, wherein the sole cover includes one or more additives to attenuate discoloration, wherein the one or more additives is a Quencher.

7. The apparatus of claim 1, wherein the sole cover includes one or more additives to attenuate discoloration, wherein the one or more additives is a Hindered Light Amine Stabilizers (HALS).

8. The apparatus of claim 1, wherein the sole cover includes a pigment additive.

9. The apparatus of claim 1, wherein the sole cover includes an inner surface, wherein the inner surface comprises a top surface, wherein the top surface is rough for helping to attach the sole cover to the shoe.

10. The apparatus of claim 1, wherein the sole cover includes a bottom wall and a side wall, wherein at least a portion of the side wall slopes upwardly and inwardly relative to the bottom wall of the sole cover.

11. An apparatus comprising:

a sole cover, wherein the sole cover is configured to be removably attached to a sole of a shoe to cover the sole of the shoe, wherein the sole cover includes a first covering section and a second covering section, wherein the first covering section is configured to cover the sole of the shoe at a toe box portion of the shoe, wherein the second covering section is configured to cover the sole of the shoe at a waist portion of the shoe, wherein the first covering section angles upwardly and away from the second covering section at an angle relative to the second covering section when the second covering section lies flat on a horizontal plane in an undeformed state, wherein the sole cover is of a sufficient elasticity that enables the first covering section to bend downwardly when the sole cover is attached to the sole of the shoe, wherein the angle and elasticity are of sufficient values to urge the sole cover against a bottom of the sole of the shoe to help secure the sole cover to the sole of the shoe when the sole cover is attached to the sole of the shoe, wherein the side wall includes a thickened area near or at the junction of the first and second covering sections, wherein the thickened area has a thickness that is greater than the thickness of the remaining section of the side wall, wherein the thickened area does not extend to a first distal end of the first covering section and a second distal end of the second covering section.

12. The apparatus of claim 11, wherein the thickened area extends further inward than the remaining section of the side wall.

13. The apparatus of claim 11, wherein the thickened area extends further outward than the remaining section of the side wall.

14. An apparatus comprising:

a shoe, wherein the shoe comprises a sole, an upper, a toe box portion, a waist portion, and a heel portion, wherein the upper is located above the sole; and

a sole cover, wherein the sole cover is removably attached to the sole of the shoe to cover the sole of the shoe, wherein the sole cover includes a first covering section and a second covering section, wherein the first covering section covers the sole of the shoe at the toe box portion of the shoe, wherein the second covering section is configured to cover the sole of the shoe at the waist portion of the shoe, wherein the first covering section angles upwardly and away from the second covering section at an angle relative to the second covering section when the second covering section lies flat on a horizontal plane in an undeformed state, wherein the sole cover is of a sufficient elasticity that enables the first covering section to bend downwardly when the sole cover is attached to the sole of the shoe, wherein the angle and elasticity are of sufficient values to urge the sole cover against a bottom of the sole of the shoe to help secure the sole cover to the sole of the shoe when the sole cover is attached to the sole of the shoe, wherein the sole cover includes a bottom wall and a side wall, wherein at least a first portion of the side wall slopes upwardly and inwardly relative to the bottom wall of the sole cover, wherein the side wall at least partially covers a side of the sole when the sole cover is attached to the sole of the shoe, wherein the sole cover does not extend beyond a top rim of the sole of the shoe and does not cover any portion of the upper.

15. The apparatus of claim 14, wherein the first portion of the side wall slopes inwardly the entire way upwardly.

16. The apparatus of claim 14, wherein the angle is in the range of 26 to 80 degrees.

17. The apparatus of claim 14, wherein the angle is in the range of 45 to 80 degrees.

18. The apparatus of claim 14, wherein the sole cover includes one or more additives to attenuate discoloration.

19. The apparatus of claim 18, wherein the one or more additives may be one of or any combination of Antioxidants, and Quenchers.

20. The apparatus of claim 14, wherein the sole cover includes a bottom wall and a side wall, wherein the side wall extends to a top rim of a side of the sole and covers the side of the sole when the sole cover is attached to the sole of the shoe.

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